

# EVOLUTION OF QUALITY MANAGEMENT: INNOVATION QUALITY FOR TOMORROW

Aftoni Sutanto  
Ahmad Dahlan University, Indonesia  
E-mail: aftoni@uad.ac.id

## Abstract

*Nowadays, global business is more complex, dynamic and decentralised than ever. Strategic management, in particular, has to deal with the effects of globalisation, such as required downsizing, mergers, worldwide collaborative arrangements. Also, intercultural communication networks, new forms of communication, and innovation in rapidly changing environments (Ayoko et al. 2004; Babcock and Babcock 2001; de Wit and Meyer 2005; Hitt et al. 2005; Lynch 2009; Prandelli et al. 2008). Corporate leaders must encourage the management to deal with change in a professional manner; then company requires innovation faster than its competitors. The capability of company leaders on managing change in an effective way would create the appropriate output, which can be accepted by stakeholders. Consequently, the company continues to survive and keeps growing.*

*Keyword: Global business, Innovation, Survive, Quality Management*

## A. Introduction

An increasingly global business environment have an impact on the intensive interaction between companies throughout the world. Some of triggering factors of globalisation include the world free trade; world level of competition business; the customer demand and requirement for goods or services in high quality and value. Also, the policy of world trade (non-tariff, quota), the rapid development of information technology and transportation, and the emergence of a potential market to be used as a business opportunity. This global environmental promises greater market opportunities, however, raises increasingly intense competition. This condition is felt in almost every country in the world. To win the competition, the company leaders should have a global mindset to be able to "read" the direction of global business in the future. The leaders of the companies should have the right strategy to anticipate.

One pace that can be done by the company is adopting the paradigm of a learning organisation. This paradigm encourages companies to adapt to the environment, also to the "learn" continuously to be ahead of the company's competitors (Budihardjo, 2016). The learning organisation will always encourage and direct the employees, customers, suppliers to work together to "observe" opportunities and use it to achieve the goals for the progress of the company. Each stakeholder is always "in charge" and is committed to learning.

If the company develops its business operations in various countries, the company will be dealing with different cultures, because each country has a different culture. This condition shows the importance of a company's culture approach. Thus the company should have a high cultural intelligence to be able to manage cultural differences into a positive performance.

According to Livermore (2010), cultural intelligence is the ability of individuals to contribute effectively to the situation across the nation, ethnicity and culture. A person with a high cultural intelligence will be able to interact effectively with others of different nationalities. In the context of the company, a leader with high cultural intelligence will be able to realise a variety of customers and manage a team with diverse cultures. The leader can recruit and develop employees from diverse cultures, using the typical leadership style and appreciate diversity. In other words, leaders with high cultural intelligence will be able to effectively manage the company in the face of an increasingly global business environment and high competitive. Company leaders must manage culture-based knowledge to generate optimal business performance. Also, the members of the company who has a high cultural intelligence will be able to understand their attitudes and behaviour are very "typical"; and able to read and exploit the opportunities that exist.

## **B. Organisational Innovation**

Competence and commitment of employees are an absolute requirement. In some cases, employees often feel forced to do the work so that the employee's performance is not optimal. The innovation-oriented company will manage employees as partners because all employees are innovators who can provide value added for the company. All employees are given the opportunity to present innovative ideas so that they feel appreciated.

Canergie & Butlin (1993) argues that innovation is something new or updated by an enterprise to create significant value added, either directly or indirectly for the company and customers. Effective innovation will drive the knowledge management process that considers ethics, add value to stakeholders so that it will build wisdom for companies.

Transfer of knowledge is one of the essential factors that need to be run in innovating so that companies can perform optimally. Efficient knowledge transfer process was also the focus of the management of knowledge because the innovative output can be either a product or service, as well as increased productivity, which is the process of transforming an input into output. In this case, the role of human resources, organisation and technology is an inseparable part of the process of improving corporate performance.

Innovation and creativity are often used interchangeably when in fact, they are different. According to Weiss & Legrand (2011), differences in creativity and innovation as follows: creativity create new ideas, to be relevant or not, it may be beneficial or not, can be implemented or not. While the innovation process must produce output that is valuable to the organisation. Nystrom (1990) asserts that most definitions of innovation have the same theme, which is associated with the idea or knowledge that transform inputs into products, processes and new systems to improve company competitive advantage and meet the changing needs of its customers. The output of the creative process is independent and not directly related to the results or performance of the business. Instead, the innovation process towards achieving sustainable outcomes that could improve the performance of the company.

Companies should consider the risk management in innovating. Risk management does not suspend or discontinue the innovation process. The evidence suggests companies that are not willing to take the risk and fear of change is the biggest cause a company to be "left behind". Many companies whose the performance is dropped, even collapse, because they can not compete and can not learn to innovate quickly and appropriately. Nokia and

Kodak become examples of companies that incapable innovate towards an era of digitalization. Initially, the two companies have become a product leader, but this time their products were abandoned by the consumer.

Companies must be able to innovate to survive and grow. Many major companies such as 3M, Microsoft, Samsung, Toyota and Unilever "vigorously" innovate and offer their products, which provide value added for the stakeholders. As a result, their product becomes a leader in its industry.

According to Henderson and Clark (1990), innovation is divided into two dimensions. First, the horizontal dimension, which explains the impact of innovation on the components of the product. Second, the vertical dimension, which refers to the impact of innovation related inter-component product. Clark (1985) suggests the function of the components is a differentiator that appear physically on a product that formed the main design concept and shows well-defined functions.

### **C. Strategic Innovation**

Companies must be able to identify the relevant stakeholders, including customers, owners, corporate leaders, employees, society and the community. Thus, companies should formulate innovative strategies to implement knowledge management effectively then the company can survive and grow. Cross (2013) stated company should understand that it is necessary to make changes and innovate continually to win the competition. It will be an ongoing process for the company and part of the culture

In the past few decades, companies prefer a closed innovation, which assumes that the innovation process only the responsibility of the company. Companies innovate without interference from the outside or survey to consumers. As a result, the output company often do not meet the customer's need. Companies that only focus on internal party will lose some opportunities because many opportunities coming from outside the organisation to optimise the company's potential (Chesbrough, 2003).

Nowadays, many companies choose to apply open innovation. Open Innovation assumes that the ideas for innovation may come from inside or outside the company. The company will continue to follow the needs of consumers through surveys, so that company could innovate and create a product that is needed in the community. The implications of the open systems management model are learning.

Katz and Khan (1978) states that the open system has the characteristics of, among others, the ability of the organisation making adjustments based on the information, input and feedback from the environment. The open system consists of events that are a cyclical character, tend to grow and have many equifinal different ways to achieve the goals. The process of production must be done properly by considering the input from outside the company, so it can produce output for the needs and desires of stakeholders who will have an impact on satisfaction. Thus, the output can be accepted by stakeholders as it has by their wishes.

According to Weiss & Legrand (2011), the company must be able to innovate effectively, and leaders must have the intelligence to innovate. Also, the company leaders must have the ability to gain insights to find solutions for complex problems or identify new opportunities that have not been thought of before, but it can be implemented. Companies

need to determine the strategy to be adopted, to achieve excellent performance compared to its competitors.

The modest innovation has a low risk and minimum impacts on the company. Otherwise, a great innovation (radical) has a big impact and high risk for the company. Day (2013) explained that modest innovations rarely provide extra growth for the company. Modest innovation is an incremental innovation of a product or service. While the big innovations are radical, and if successful, it would impact on the future significantly.

#### **D. Innovation and Implementation Quality Management**

The Implementation of total quality management (TQM) contributed to strategic product innovation. Quality management resources can be used to support strategic innovation (Silva et al., 2014). The resource-based view defines key resources that firms develop during the implementation of TQM systems: TQM culture, product design capability, and process improvement capability – and assesses the role of these resources in the success of product innovation. For instance, continuous improvement, performance measurement, and an “open” culture are seen as important aspects of both TQM and innovation (Prajogo and Sohal, 2001).

These commonalities suggest that organisations that implement TQM could be more innovative than organisations that do not (Singh and Smith, 2004). Successful product innovation and the ability of companies to improve their innovation processes rapidly became essential requirements for competitive advantage and long-term growth (López-Mielgo et al., 2009; Perdomo-Ortiz et al., 2009).

There is an apparent tension between TQM and innovation. TQM is about consistency, standardisation and control, whereas innovation is about change, difference, and accepting failure. Some argue that TQM has built-in mechanisms for learning that will bring about cost reduction and other improvements to established processes. TQM fails to inspire the changes needed for product innovation (Silva et al., 2014). However, others claim that quality management practices constitute a foundation for product innovation systems (Pisano, 2002).

#### **E. Evolution of Quality Management**

Half a century ago, Peter Drucker made the point that innovation is the only true differentiator in the marketplace. Based on the evolution of thought over the past half-century, quality, innovation, in fact, is a natural result of the quality of thought, although innovation is sometimes involved behaviours and thoughts that contradict some quality practice. The intense military activity of World War II laid the seeds of today's quality profession. The need to control manufactured products and materials triggered quality control (QC). In the following years, this evolved into quality assurance (QA), as it was realised that preventing problems was cheaper than correcting them. The oil crisis of the 1970s led to the focus on quality management, and the knowledge developed in the '70s and '80s started to be codified in the '80s with the emergence of ISO 9000 and excellence models such as the Baldrige Criteria for Performance Excellence (Timmerman, 2013).

Overwhelming evidence shows the most innovative companies are the most profitable (IBM CEO Survey 2006), and that to succeed, one has to take a strategic view of the

marketplace. Innovation is a natural evolution of quality management and has been termed "Quality for Tomorrow" or, in other words, meeting the needs of tomorrow's customers. Some organisations gradually implemented TQM systems, including Six Sigma methodology, the basis of competitive advantage swiftly shifted from quality to innovation (López-Mielgo et al., 2009; Perdomo-Ortiz et al., 2009).

Twenty-first-century technology has enabled companies to deliver quality more consistently and more easily. The focus has therefore shifted to marketplace differentiation through better service and support. In turn, led to the differentiation of the offering to the customer through radically new or innovative solutions. Quality's historical emphasis on "reducing variation" must be adapted this time to "introducing variation" to meet the diverse challenges faced by customers and users.

The customer is ultimately the driver of innovation, not the scientist, engineer, or designer. Business has focused on the importance of "agreeing requirements" with the customer, and the quality profession has focused on ensuring those requirements are met. Its market strategy is a flawed. There may be unmet customer needs because it not included in the "agreed customer requirements." It will become opportunities for the competitor who finds these needs, and then they fulfil our lacks. The innovator finds unmet customer needs, and then finds radical solutions to those unmet needs and create ideal solutions that are hard for the competition to copy (Timmerman, 2013).

## **F. Conclusion**

Some companies have opened themselves to ideas that come externally, either on management or technology to be applied to their business. With open innovation, a company may innovate more, and fewer internal resources wasted, save time, reduce the risk of identifying new markets (Affif, 2017). There are several facts that support the emergence of the concept of innovation in the last decade:

**First**, innovation management is becoming more collaborative. Open innovation process not only access to ideas from external and share their ideas with the internal organisation. Instead, an interactive process will traverse organisational boundaries; the general public will be interested work together for creating the latest innovations. Some companies will be more competitive regarding breadth and depth to improve the quality of the community that surrounds their activities. The presence of new technologies such as intelligent software, will help the company to interact with customers more intensively and more productive, besides being able to explore their potential to be fully involved as partners in the innovation process.

**Second**, innovation in the business model will be as important as innovation in technology. The business model is the main way for the company to create value for the customers and take some part of that value for the benefit of himself. Companies whose ambitious to expand their business to developing countries often find that the business model applicable in developed countries, may not be successfully applied in some new markets in developing countries.

**Third**, mastery of the art and science of innovation is indispensable. The knowledge gained from the experience of managing innovation, especially about the study of new products and technologies. One may predict that the formula of success managing innovation in the next decade can occur with open service innovation approach. The first step towards a successful service innovation recognises that the customer as the heart of

innovation services. Companies that perform services innovation will learn to overcome challenges

## References

- Afiff, Faisal. (2017). Strategic innovative leadership. This article is published at <http://sbm.binus.ac.id/1/17/2015>
- Budihardjo, Andreas. (2016). *Knowledge Management: Effectively Innovating Achieving Success*. Jakarta: Prasetya Mulya Publishing.
- Canergie, R. & Butlin, M. (1993). *Managing the Innovative Enterprise: Australian Companies Competing against the World's Best Business*. Melbourne: Business Council of Australia.
- Chesbrough, Henry William. (2003). The Era of Open Innovation. *MIT Sloan Management Review* Vol. 44, 3, p. 35-41
- Clark, K. B. (1985). The Interaction of Design Hierarchies and Market Concepts in Technological Evolution. *Research Policy*, Vol. 14, p. 235-251
- Cross, Barry L. (2013). *Lean Innovation: Understanding What's Next in Today's Economy*. New York: CRC Press.
- Henderson, R. M. & Clark, K. B. (1990). Architectural Innovation: The Reconfiguration of Existing Product Technologies and the Failure of Established Firms. *Administrative Science Quarterly*, Vol. 35, No. 1
- Katz, Daniel & Khan, Robert L. (1978). *The Social Psychology of Organization*. Second Edition. New York: John Wiley & Sons
- Livermore, D. (2010). *Leading with Cultural Intelligence*. New York: AMACOM.
- López-Mielgo, N., Montes-Peón, J.M. and Vázquez-Ordás, C.J. (2009). "Are quality and innovation management conflicting activities?", *Technovation*, Vol. 29 No. 8, p. 537-545.
- Nystrom, H. (1990). *Technological and Market Innovation Strategies for Product and Company Development*. London: John Wiley & Sons
- Perdomo-Ortiz, J., González-Benito, J. and Galende, J. (2009). "The intervening effect of business innovation capability on the relationship between total quality management and technological innovation", *International Journal of Production Research*, Vol. 47 No. 18, pp. 5087-5107.
- Pisano, G. (2002). "BMW: the 7-series project". *Harvard Business School Case*, Vol. 9, p. 692-1083.
- Prajogo, D.I. and Sohal, A.S. (2001). "TQM and innovation: a literature review and research framework", *Technovation*, Vol. 21 No. 9, pp. 539-558.
- Silva, G.M., Gomes, P.J., Lages, L.F and Pereira, Z.L. (2014). The role of TQM in strategic product innovation: an empirical assessment. *International Journal of Operations & Production Management*. Vol. 34 No. 10, p. 1307-1337
- Singh, P.J. and Smith, A.J.R. (2004), "Relationship between TQM and innovation: an empirical study", *Journal of Manufacturing Technology Management*, Vol. 15 No. 5, p. 394-401.
- Timmerman, John. (2013). *Innovation is Quality for Tomorrow: ASQ Innovation Think Tank Executive Summary* (pp. 12). Milwaukee: American Society for Quality.
- Weiss, D. S. & Legrand, C. P. (2011). *Innovative Intelligence*. Canada: John Wiley & Sons, Ltd.